

Figure 1

**Not1 Site**

5'gcgccgcgcccccgccacttttgccattcaccgagcgaagctagacacaaacaaagatt  
gtggaccggtgaaacagcttttgagctttgacctgctcaagttggcagggacgtcgagtcacaacct  
ggcctttcttctctgaagtaggtcaaatTTTTTccaagttggtgaaccatcaaccagatgcaggag  
gacatgtcaacaaaaacacggaccgaccttaaccggttggtgtgtgtgattgaggaaactggccaccgg  
agtgaaggctatcaggaccggtctcgatgaggccaaacccctggtacaagctcatcaagctcttgagc  
cgctgtcatgtatggccgctgtagcagcacggtcaaaaggaccagtccttgtggccatcatgtctggct  
gacaccggccttgagattctggacagtacctttgtcgtgaagaagatctccgactcgctctccagtcctttt  
cacgtaccggcccccgctcttcagtttcgggaattc 3'

**EcoRI site****(SEQ ID NO:21)**

Figure 2

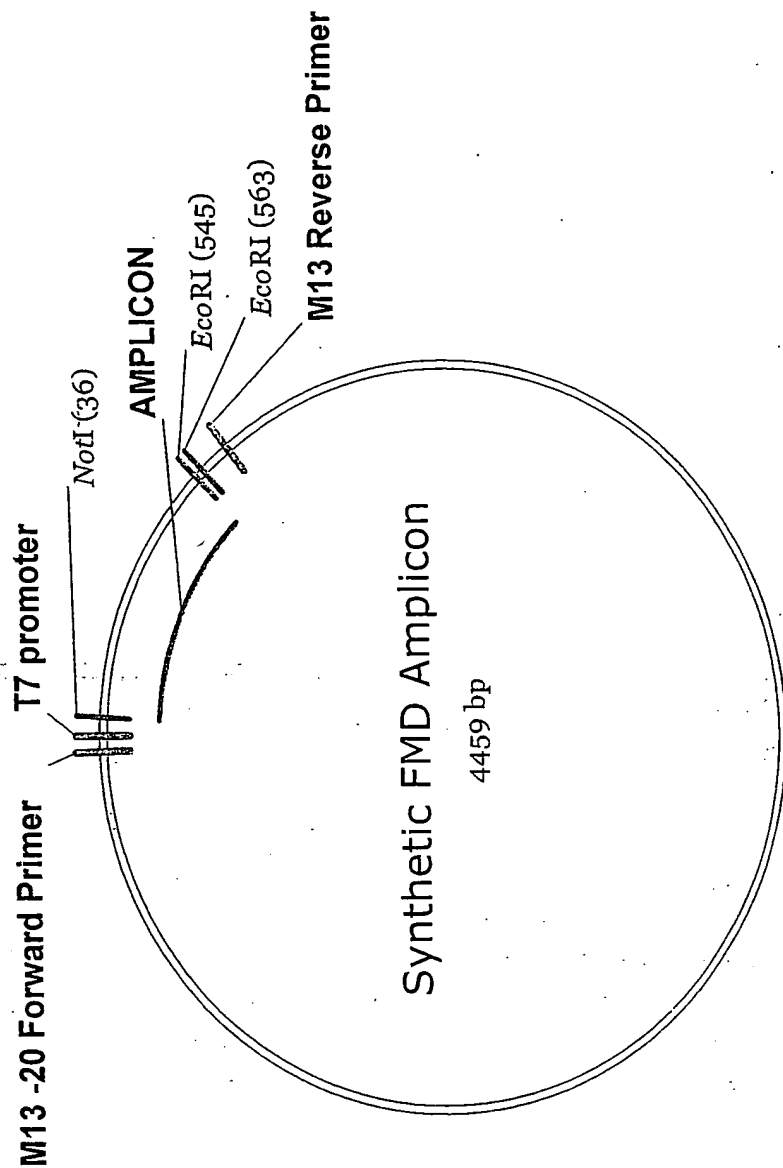


Figure 3

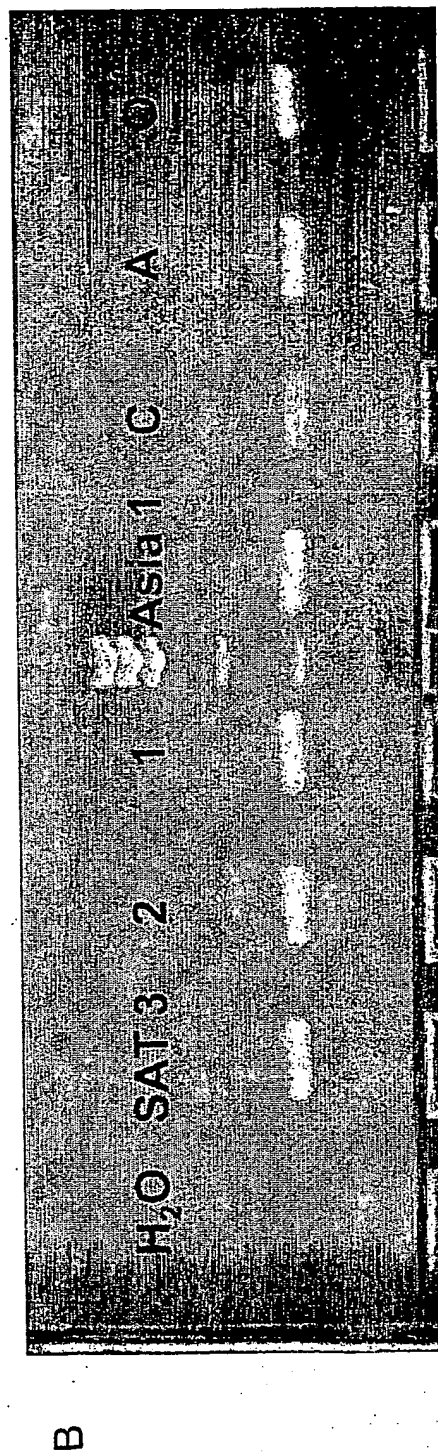
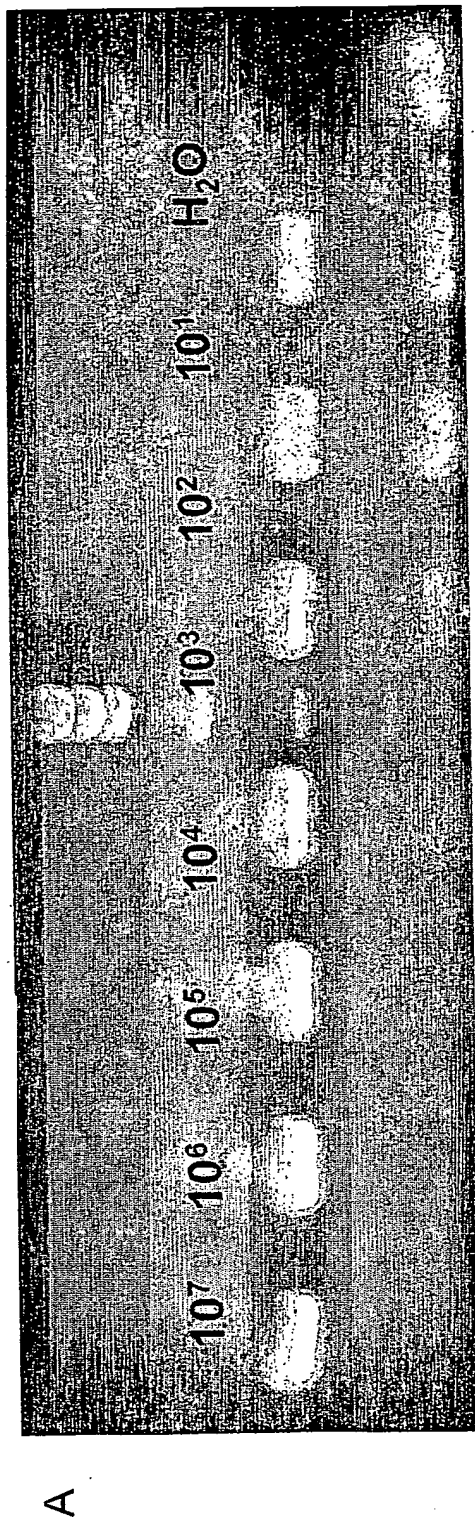


Figure 4

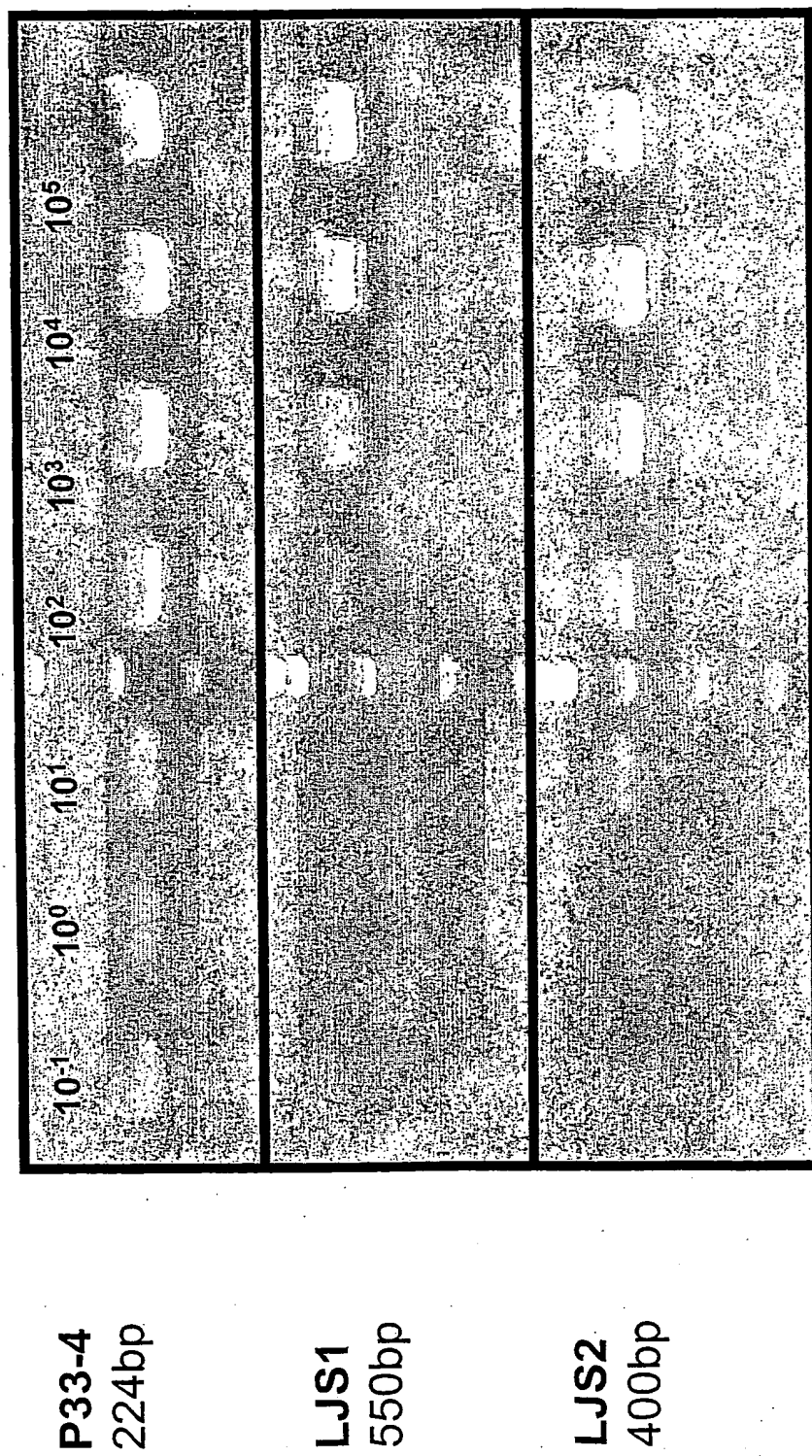
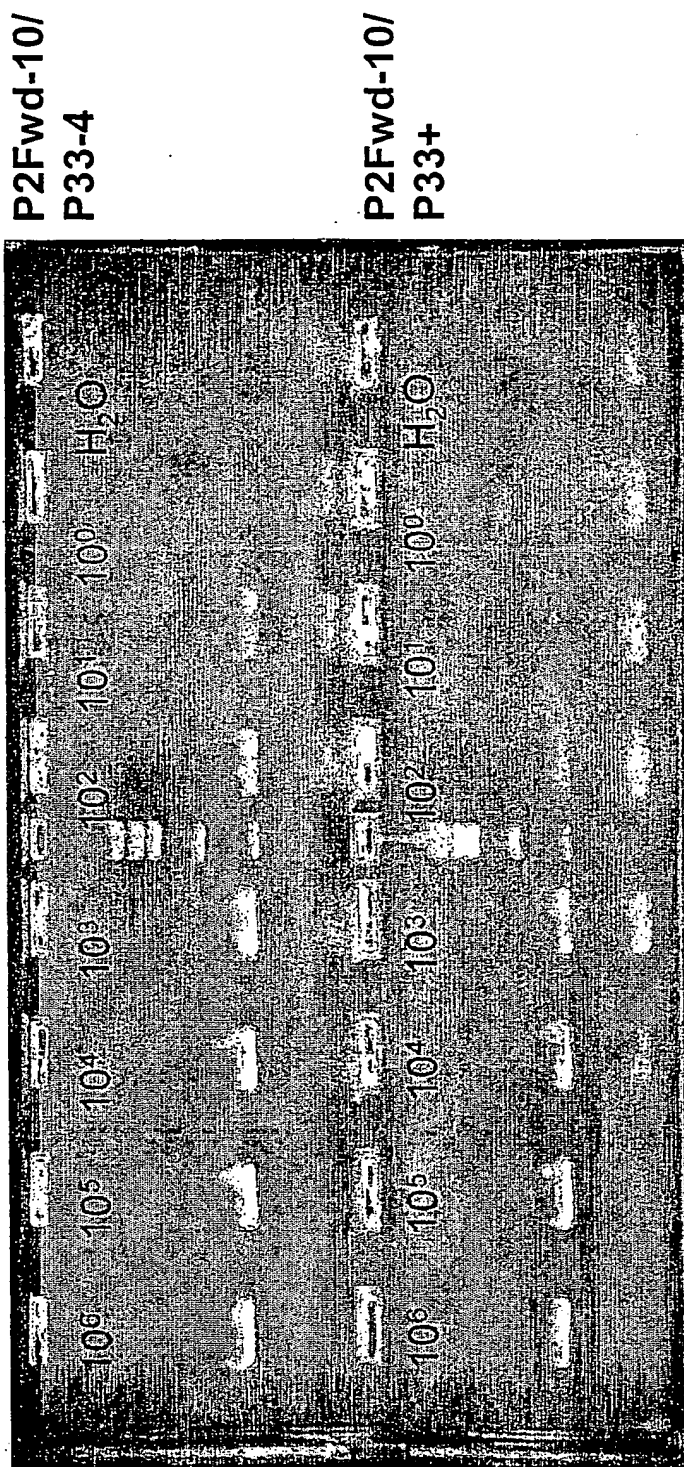
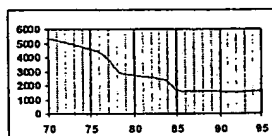
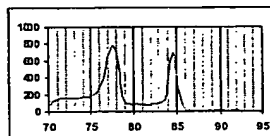


Figure 5



**Figure 6****Mechanism of melting curve analysis****Data Transformation**

Raw Data



Processed Data

**Data transformations involve the following:**

1. Interpolate data to get evenly spaced data points
2. Take log of fluorescence (F)
3. Smooth log F
4. Calculate  $-d(\log F)/dT$   $-d_F/d_T$
5. Reduce data to 11-13 data points spaced one degree apart depending on the target organism